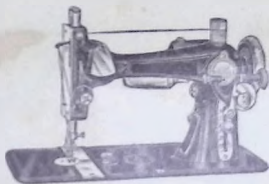


*Instruction Book*

EXP. B. T.

(LONG SHUTTLE)

ELECTRIC  
SEWING MACHINE



## —IMPORTANT—

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Be sure that the voltage, marked  
on the name plate of your motor,  
is the same as the current in  
your home.

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## HELPFUL SUGGESTIONS

Know the machine thoroughly, become acquainted with the parts, call every part by its name. See large illustration, pages 20 and 21.

There are only two places to oil the motor. They are plainly evident, one oil hole above each armature shaft bearing. Just a drop of oil a day is sufficient if the machine is used constantly. A drop once a week where it is used occasionally, as in the home, will assure perfect running and satisfactory results.

Thread the machine as shown in Figure 12, page 9.

Thread the shuttle as shown in Figures 9-10-11, page 8. Do not allow dust or dirt to collect under shuttle spring.

Do not allow presser foot to come in contact with feed when machine is running. Always have a piece of cloth between them.

Read motor lesson pages 4 and 5.

Do not change any of the adjustments. The machine was perfectly adjusted at the factory.

Should you find it necessary to have the head of the machine repaired, get in touch with the firm that sold you the machine. Arrangements can then be made to return the head to the factory where expert attention will be given it.

Know your set of attachments.

A full set of attachments comes with this machine. The lessons given in the Instruction Book will show you the best use for each attachment.

## GENERAL INSTRUCTIONS

Before leaving the factory every machine has been carefully adjusted and minutely inspected, its sewing qualities having been tested on all kinds of work, and found perfect in every respect.

Do not tamper with the adjustments of the machine; serious trouble is almost sure to result from any unnecessary meddling with the working parts.

Before commencing to sew be certain to oil and clean machine according to instructions.

After using the machine, always see that it is well cleaned before putting it away.

Do not attempt to use the attachments until you can manage the machine with ease on plain sewing.

In sewing where special elasticity is required, as on bias seams, or very elastic material, hold the work back slightly, to keep the cloth stretched while being sewed.

Machine not working properly generally is caused by the following: The thread being too coarse or fine for the needle, the needle being bent or blunted; poor thread. See that the needle is perfectly straight and that it is pushed up as far as it will go into the needle bar. It should pass nearly through the center of the needle plate hole when properly set.

Should the machine miss stitches in running off from a thick seam, hold the cloth back slightly to keep it straight and to prevent its rising up with the needle. In using slack, twisted, or uneven silk, should it become frayed or roughened, the needle is too fine, or has a hook upon its point caused by striking the needle plate.

To turn a corner. Stop the machine with the needle in the cloth. Then lift the presser foot and turn the work in the direction desired, using the needle as a pivot.

The presser foot must never be left down on the feed when the machine is running unless there is cloth between, as the sharp teeth of the feed will injure the bottom of the presser foot.

When ordering needles, or parts, or supplies of any kind for this machine, always give the full name and number of the machine. This number will be found stamped on bed plate underneath front shuttle slide.

Know your machine. Refer to large illustration on pages 20 and 21 which will help you to identify the parts as explained in instructions.

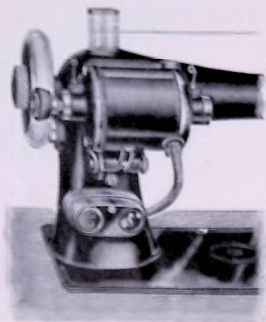


Fig. 1

## MOTOR

The motor is fastened to the machine in its working position as shown in Fig. 1. The contact of the motor-driving pulley against the balance wheel drives the machine.

The motor voltage is shown on the etched plate attached to motor. The motor is universal and will operate with equal success on either 105-120 volts A. C. or D. C. systems. Be sure your power supply is correct, then proceed.

**FIRST.** Attach cord from lamp socket to junction block under motor. This is the cord with the socket that is smooth, it fits into the junction block socket that has two connection prongs extending from it.

**SECOND.** Attach cord from foot control. This plug has the two prongs which fit into the recessed holes in junction block. This connection is unnecessary when knee control is used with cabinet type machines.

**THIRD.** Turn on the electric switch to apply power to motor. Place foot control in convenient position. Pressure on foot pedal will start the machine. If your machine is of the cabinet type equipped with knee control slight pressure by the knee on the controller lever will start the machine.

**CAUTION.** Be sure you have a piece of goods between presser foot and feed. To operate machine without cloth under presser foot will cause serious injury to machine.



Figure 2—Foot Control



Figure 3—Knee Control

Points marked "Oil Holes" are the only places where the motor requires oiling. One drop of good sewing machine oil once a day where the machine is used constantly, or once a week where it is used occasionally will insure perfect running and satisfactory results.

## INSTRUCTIONS FOR SETTING MOTOR PULLEY

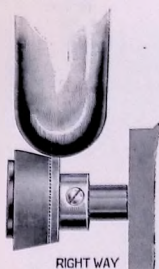


Figure 4

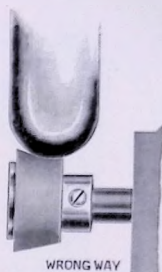


Figure 5

## THE MOTOR PULLEY

It is very important to have the motor pulley set correctly. A  $\frac{1}{8}$ " bearing as in figure 4 will generally be found to be just right. If the motor pulley is set in too far against the balance wheel as in Figure 5, the machine will start hard, the motor will heat up quickly, the machine will not run as fast as it should, and the motor pulley will soon wear out. A very good way to find if pulley is set right is to hold the balance wheel and press the control lever. If the motor pulley slips around on the balance wheel, the pulley is set right. If, by holding the balance wheel, the motor is also stopped, the motor pulley is set in too far and should be adjusted until it slips when balance wheel is held.

**CAUTION:** Be careful to avoid getting any oil on the rim of the hand wheel and the rubber face of the motor pulley.

## TO OIL THE MACHINE

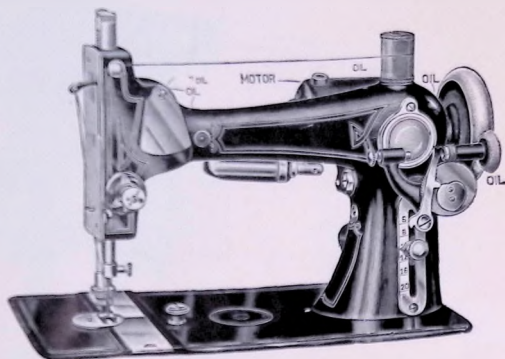


Fig. 6

To run your sewing machine properly, and to have it wear well, you must thoroughly oil it occasionally, including motor. If the machine is in continuous use, it should be oiled every day. With moderate use only occasional oiling is necessary. The above figure shows you all the places you must oil. One drop at each point is sufficient.

If the machine seems to run heavily or if it makes undue noise after standing for some time, use a little kerosene in all oiling places, run the machine rapidly for a few minutes, wipe clean and then oil with best sewing machine oil.

Never use cheap oil. It will gum your machine and injure rather than lubricate the parts. It is safer to purchase your oil at a sewing machine store or sewing machine department. Occasionally, when thoroughly cleaning your machine, turn the machine over back and oil all working parts underneath the bed plate.

After oiling the machine, stitch a yard or so on a piece of waste material before starting to sew on a garment. This will prevent any oily thread from soiling new goods.

## WINDING BOBBINS

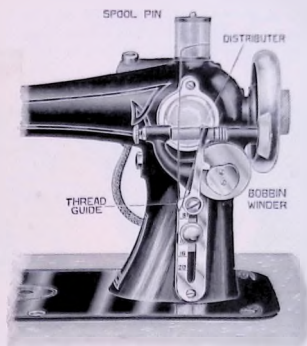


Fig. 7—Winding the Bobbin

With the left hand, hold the balance wheel, turning the brake button (center, right of wheel) toward you with the right hand. This stops the sewing mechanism of the machine. Push the bobbin winder up so that the rubber wheel comes in contact with the balance wheel. Catch the thread in with the bobbin as it is inserted in the right end of the socket; pull out the spindle socket at the left to admit the other end of the bobbin, and let it back slowly. Carry the thread from the bobbin, first through the upper end, then through the lower slots in the distributor. Start the motor and be sure to stop before the thread is wound higher than the metal ends of the bobbin. When finished pull bobbin winder down and tighten brake button.

## TO REMOVE SHUTTLE FROM CARRIER



Fig. 8—Removing the shuttle from carrier

Pull out front shuttle slide far enough to bring shuttle carrier into full view. Push down the point of shuttle to release it at the back, and with the thumb and forefinger lift it from the carrier. Do not attempt to remove the shuttle by pulling at the spring, as this is liable to bend it out of shape.

## THREADING THE SHUTTLE

Hold the shuttle in the left hand, as shown in Fig. 9, and insert the wound bobbin in the shuttle, leaving a loose thread about four inches long. Drop the bobbin into shuttle so that the thread in sewing will draw from the upper side.



Fig. 9—Starting bobbin in shuttle



Fig. 10—Pull the thread down

Place the forefinger at the end of shuttle to hold the bobbin in place. With the right hand draw the thread downward and slightly to the left until it has worked in under the spring at the point of the shuttle. (See Fig. 10).

Pull thread upward in position so that it pulls from the shuttle, as shown in Fig. 11. Make sure that the bobbin revolves freely in the shuttle. This can be done by pulling out two or three inches of thread. Put the shuttle in machine and replace front shuttle slide.



Fig. 11—Draw the thread up in sewing position

## THREADING THE MACHINE

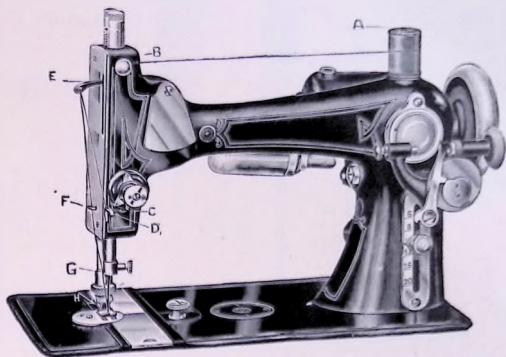


Fig. 12—The machine threaded, showing the different thread guides

Place thread on spool pin (A) carry it between the discs of the friction thread guide (B). Then down to the right and through tension discs (C), under spring, and with a turn from you hook into loop (D). Carry thread up through takeup (E), threading from front to back (always have takeup, E, at highest point when threading). Bring thread down through guides (F) and (G) and into needle (H)—threading from left to right.

Do not wrap thread around discs of friction thread guide (B) or tension discs (C).

The sewing guide is attached to the bed of the machine by means of the thumb screw and is used as a guide for straight stitching.



Fig. 13

## SETTING THE NEEDLE

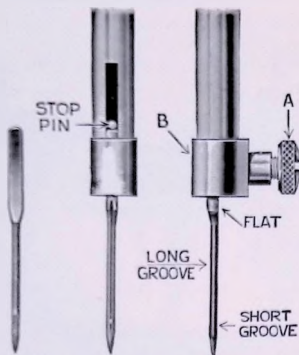


Fig. 14—Needle; needle bar and needle; needle clamp screw.

Raise the needle bar to its highest point, then loosen the needle clamp screw (A) with the large screw driver which comes in the box of attachments. Take the needle between the thumb and forefinger of the left hand, pass the shank up into the slot of the needle bar (B), with the flat side of the shank toward or against the needle bar, until the end of the shank sets firmly against the stop pin. Then tighten the needle clamp screw with the screw driver. Make sure needle does not strike presser foot.

Only the best quality needles should be used. Be sure when buying needles to mention that your machine is a Long Shuttle Type. (Needles for a Rotary Machine are different). Select the proper size needle for the thread you are to use from the table below. The thread should match the texture of the material you are sewing as nearly as possible.

## SIZES OF NEEDLES AND THREAD

Size of Needles	Class of Materials	Sizes of Silk and Cotton
1	Very fine silk or chiffon.	300-500 cotton 0000 silk
2	Fine silk, organdie, net or laces, etc.	120-200 cotton 000 silk
3	Fine cotton goods, organdie, lawn and silk.	90-110 cotton 0-00 silk
4	Shirting, sheeting, muslin, all classes of household linen and underwear.	70-80 cotton A or B silk
5	Heavy muslin, woollen goods.	40-60 cotton C silk
6	Ticking, woollen goods, boys' clothing, coats, etc.	12-36 cotton
7-8	Coarse work, heavy stitching generally.	0-10 cotton

## TO COMMENCE SEWING

After the machine is threaded, pull up the under thread by turning the balance wheel over with the right hand, while holding the upper thread with the left hand. Allow the needle to enter the needle hole to pick up the under thread. Both threads should then be pulled to the back of the presser foot. Lower the presser bar after the cloth is inserted, and begin to sew, regulating the speed with the pressure of the foot on the motor foot control.

Unless there is cloth between do not leave the presser foot down on the feed while the machine is running, as this injures both foot and feed.

## TO REGULATE THE LENGTH OF STITCH

The length of stitch is regulated by means of the stitch regulating screw. (See Fig. 16 on pages 20 and 21). To lengthen the stitch, loosen the screw and push it up. To shorten the stitch, push the screw down or to a higher figure. Always tighten the screw before sewing.

## TO AVOID THE PRESSURE ON THE MATERIAL

In ordinary sewing it is seldom necessary to change the pressure of the presser foot on the material. In sewing fine silks, chiffon or other delicate fabrics, lighten the pressure by turning the presser bar regulator up (See Fig. 16 on pages 20 and 21). This releases the pressure from the material and prevents prints or roughness appearing on fine materials.

To increase the pressure when sewing on heavy materials or over heavy seams, turn this regulating screw down.

## TO REMOVE THE WORK

Stop the machine with the thread take-up at the highest point, raise the presser foot and draw the fabric back. Pass the threads over the thread cutter and pull down gently to break them. Leave the end of the threads about three inches long, so the upper thread will not pull through the eye of the needle when you start to sew again.

## THE THREAD CUTTER

It is easily snapped into place on the presser bar. The thread cutter will be found in the small envelope in the box of attachments.

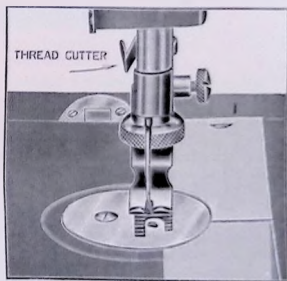
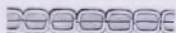


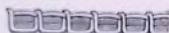
Fig. 15  
Thread cutter attached to machine

## TO REGULATE THE TENSIONS

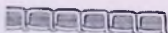
It is important to thoroughly understand the regulating of the tension for both upper and lower thread. You must know its effects upon the general appearance of the stitching. No matter what kind of material you are using, the thread should lock in the center, as shown in the figure below:



If the upper tension is too tight, or the under tension too loose, the thread will lie straight along the surface of the material, as shown in figure below.



If the under tension is too tight, or the upper tension too loose, the thread will lie straight along the underside of the material, as shown in figure below.



Many times when you are unable to make a perfect stitch you will find that a knot of thread is caught either in the upper or lower tension. The spring on the shuttle regulates the lower tension, and a knot of thread causes it to be held up. This would not allow spring to press on the thread. Loosen the shuttle tension screw (See Fig. 11 on page 8), slightly raise the spring, remove knot, and adjust tension screw.

The upper tension is governed by flat discs. These are regulated to press on the thread by turning the tension regulators (See Fig. 16 on pages 20 and 21) to the right to tighten and to the left to loosen. A knot of thread may be released from the discs by loosening the screw sufficiently. The upper tension can only be tested when the presser bar is down, as it is released when the bar is thrown up.

## TO SEW ON THE BIAS ON FINE MATERIALS

Use a short stitch and a loose tension on the upper thread, so the thread is left loose enough in the seam to allow the goods to stretch, if necessary.

## A BASTING STITCH

Use the longest stitch the machine will make and a loose upper tension. This stitch can easily be pulled out.

## TO AVOID BREAKING NEEDLES

See that the presser foot or attachments are securely fastened to the presser bar by means of the thumb screw and that the needle passes through needle hole. Do not sew heavy seams or thick goods with too fine a needle. Use the table on page 10 for the correct size of needle and thread to correspond with materials. Avoid pulling the work while stitching; merely guide the cloth and the feed will carry it along.

## CAUSES OF UPPER THREAD BREAKING

When the upper thread breaks it may be caused by—

- Incorrect threading of machine;
- Tension too tight;
- Thread too coarse for needle;
- Needle bent, blunt-pointed, or set incorrectly;
- Starting machine at full speed;
- Not bringing up lower thread correctly.

## CAUSES OF LOWER THREAD BREAKING

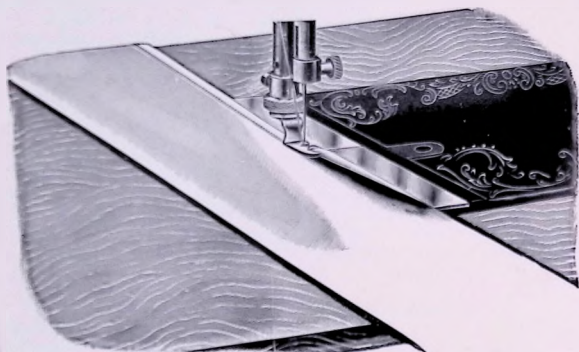
This may be caused by incorrect threading of the shuttle; by not bringing up lower thread before starting to sew; by having too tight a tension; or by having bobbin wound too full to revolve freely in the shuttle.

## SKIPPING STITCHES

The needle may not be properly set; it may be blunt or bent. The thread may be too heavy for the size of the needle. Needle may be too short.

## HOW TO USE THE ATTACHMENTS

The following pages take up the use of your set of attachments. With a little practice you should soon be doing the fancy sewing formerly sent to an experienced seamstress. **DO NOT ATTEMPT TO USE THE ATTACHMENTS UNTIL YOU ARE FAMILIAR WITH THE MACHINE, AND CAN DO PLAIN SEWING SUCCESSFULLY.**

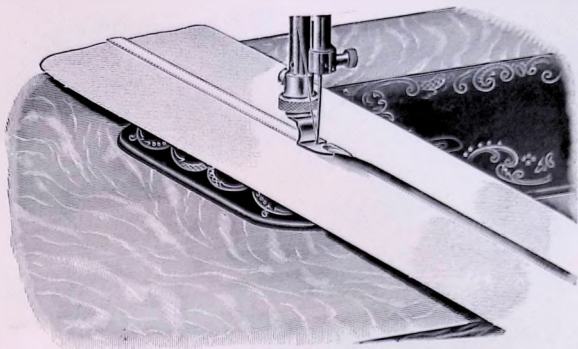


### NARROW HEMMING

Remove the presser foot and insert in its place the foot hemmer. Raise the presser bar lifter to the right, clip off the right hand corner of the cloth and turn up the edge about one-quarter of an inch, so as to enable it to pass easily into the scroll of the hemmer, push it forward to the needle, let the hemmer down and start the machine, gently holding back on the work to keep it smooth and allowing the edge of the goods to pass between the thumb and forefinger of the right hand while it is being hemmed, keeping the goods rolled up on the edge as it passes into the hemmer. The latter should be kept just full. If too much cloth passes in, it will make a rough and clumsy hem, or the goods will be crowded out of the hemmer. If too little, the raw edge will not be turned in.

In hemming a curve on flannel or very elastic goods, draw gently on edge being hemmed, resisting the feed slightly, and guide the work carefully. The stitch may be made close to the edge, or away from it by loosening the screw at the back of the attachment holder and swinging the hemmer slightly to the right or left.

## FELLING

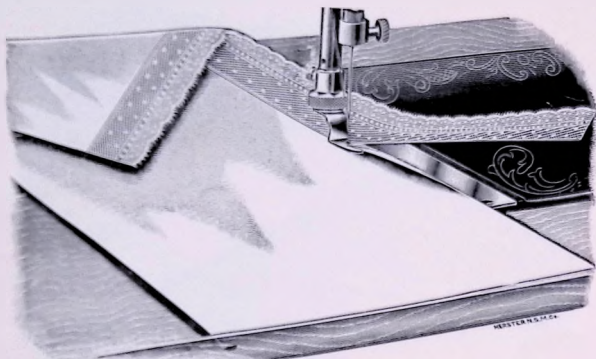


## FELLING

The narrow hemmer and feller are the same. If the hemmer is attached it can be used in place of the presser foot in running up a seam. Sew together two pieces of cloth with the under edge projecting between one-eighth and one-quarter of an inch beyond the upper edge, then trim the edges if necessary, leaving enough goods between the row of stitching and the edges to fill the hemmer and turn it nicely, open the work flat, wrong side up, and trim the corner of the same slightly, then push the goods into the feller until the needle is reached. Lower the feller on the feed and start the machine. The feed will carry the seam through without assistance, making a complete fell from the beginning. There is no necessity of touching the goods at all, but just as well to keep them smoothed out nice and flat.

The positive double feed makes this variety of work a special feature of this machine.

## HEMMING AND SEWING ON LACE



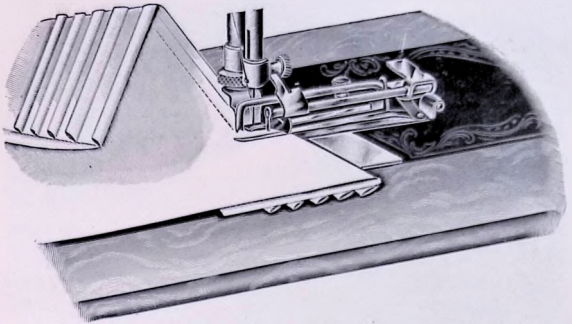
## HEMMING AND SEWING ON LACE

### In One Operation

The hemmer and feller which accompanies this machine is made with a slot for the needle to pass through instead of a round hole as in most attachments. This slot is to enable the operator to make a hem and sew on lace at the same time. Proceed as follows: First start a narrow hem, and when the goods are well under control and passing smoothly into the hemmer, stop the machine, raise the hemmer with presser bar lifter, raise the needle to its highest point, and then carefully pass the end of the lace through the slot in the side of the hemmer, carrying it under the back of the hemmer and on top of the hem.

Then lower the hemmer and proceed as in ordinary hemming. Guide the lace over the front of the hemmer, keeping it well in the slot so that the needle will catch it every time it passes into the goods.

## TUCKER



## TUCKER

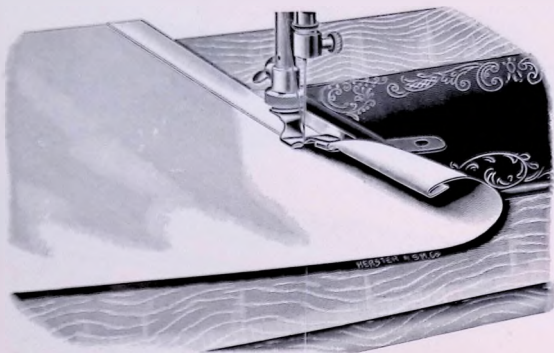
Slip the fork of the tucker into the attachment holder on the presser bar, and with the screw fasten it down firmly, being careful to have the needle go through the needle hole in the tucker frame. The tuck marker is operated by the neck of the needle clamp striking in the tuck lever.

The rear scale of the tucker indicates the width of the tucks to be made, and the front scale indicates the distance between the different tucks.

To have tucks that just meet, set rear scale at Figure "1" and front scale at Figure "2," etc. To have tucks that overlap, set the front scale at a lower figure than the back and to have tucks separated, set the front scale at a higher figure than the back.

Fold the cloth at the place where the first tuck is desired, and place it under the tucker lever and the presser foot, with the folded edge to the right and against the upright guide of the tucker. The tucker lever and creaser mark the cloth for the next tuck, and after the first tuck is completed the cloth should be folded along this mark and placed as before, and so on..

## WIDE HEMMING



## WIDE HEMMING

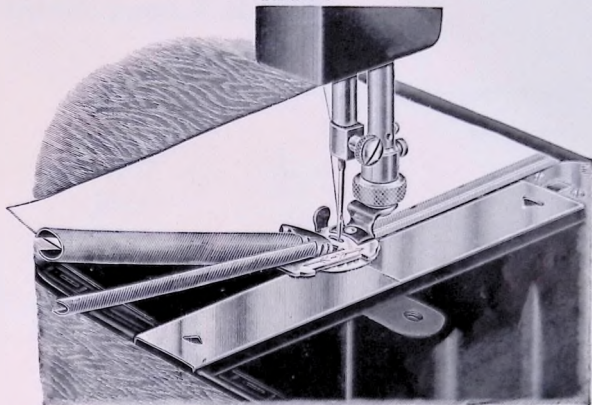
Each machine is furnished with four hemmers of assorted widths. They are called foot hemmers because they are fastened to the presser bar of the machine, the same as the regular sewing foot. Select the width of hemmer that you desire to use, and attach it to the machine as shown above.

You will readily see that it can be adjusted to the right or left a little, so as to stitch as close to the edge of the hem as desired, by loosening the set screw of the attachment holder and swinging the hemmer to desired position.

Take the cloth in both hands, the right hand in front of the hemmer, and the left, behind. Insert the edge of the goods in the scroll of the hemmer and draw it back and forth a few times, while gradually feeding the cloth into the hemmer, so as to fill the scroll completely.

When you have the hemmer full, draw the cloth back toward you to start the hem near the end. Let down the presser foot and proceed as in narrow hemming.

## BINDING



## BINDING

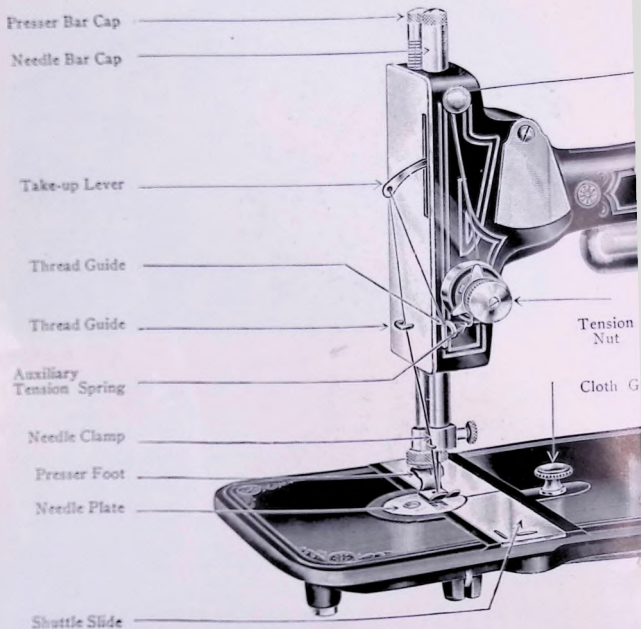
Remove the presser foot from the machine and attach the binder in its place. The binder is adjustable sidewise, to bring the stitching properly close to the edge of binding. The little downward projecting lug serves as a guide to prevent the narrow widths of binding from riding out under the foot toward the right.

With this new multiple binder a garment can now be piped and bound in one single stitching. Even two bindings of contrasting color can be entered into their correct size slots for piping, and enclosed in a still narrower binding, giving the effect of a double reversible piping. The narrowest width should be entered into its slot first and drawn through to the needle, then followed by the others.

The Multiple Slot Binder will carry binding of six different widths single fold commercial bindings sizes 1, 2, 3, 4, 5, and 6. They are fed respectively through the five slots in the binder scroll, beginning with the smallest. Sizes 5 and 6 are fed through slot No. 5. The single fold commercial binding for sale in department stores must be used. In addition, it will carry the familiar 15/16 inch bias cut binding which every woman has always used, making it herself with the aid of the scissors gauge, from self material or otherwise. The 15/16 bias cut binding is entered through the open mouth of the scroll.

Finer fabrics call for the narrower bindings. The binding should be entered into the slot or scroll, depending on the size binding used, and passed through until the end comes under the needle, then the material to be bound is placed between the folds of the scroll, next lower the binder, then start the machine. Feed the binding with the right hand and guide the goods with the left, being careful to keep the goods well between the scroll and to keep the binding from becoming twisted.

# Exp. B. T. Long Shuttle Ty



You will find it helpful to refer to this picture and  
To Thread Machine

# pe Electric Sewing Machine

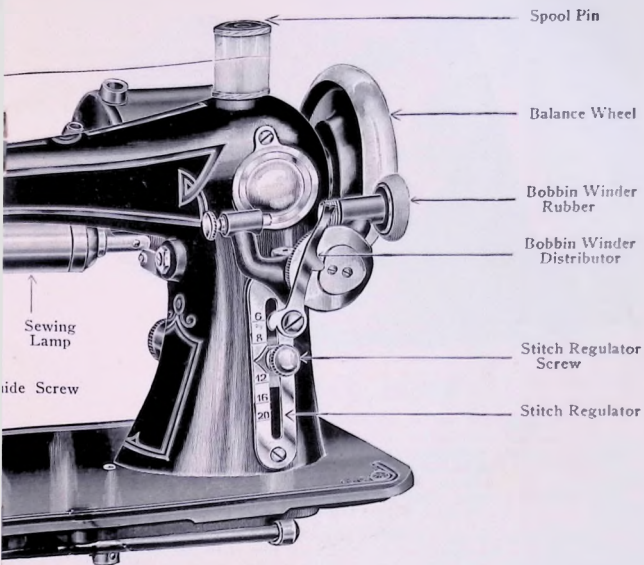
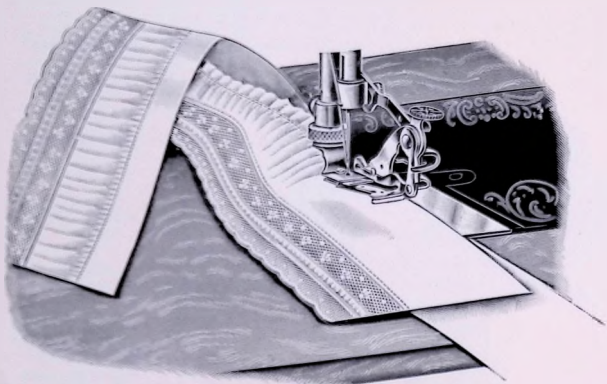


Fig. 16

Identify the parts as they are explained in instructions

Refer to Page Nine

## RUFFLING OR GATHERING



## RUFFLING OR GATHERING

In attaching the ruffler, raise the needle to its highest point, remove the presser foot by loosening the milled edge nut of the attachment holder. Raise the operating arm of the ruffler and place the jaw astride the stem of the needle clamp, raise the ruffler and place the jaws of the frame into the attachment holder in the same manner as the presser foot, then screw the milled edge nut down firmly, taking pains to set the ruffler so that the needle will pass through the center of the needle hole.

The fullness of the gathers is controlled by the adjusting screw in the fulcrum of the operating lever; turning this screw to the right decreases the fullness of the gathers, to the left increases the fullness. It is always best to regulate the length of stitch to correspond with the fullness of the gathers, especially when making scant gathers be sure to have the stitch adjusted short.

For plain or single ruffling, insert the edge of the cloth to be ruffled, between the upper and under plates of the ruffler, until the edge of the cloth is under the needle, then start the machine and feed the goods straight through.

For making ruffling on a band, insert the band in the slots of the front of the ruffler and carry the band under the separator blade and next to the feed on the machine, then place the cloth to be ruffled the same as for a plain ruffle.

## **RUFFLING BETWEEN BANDS**

### **As For Making Aprons**

Place the lower band in the ruffler, having the right side of the goods up; place the apron into the ruffler gauge, then place the top band over or on top of the ruffler gauge and under the ruffler foot. This operation will blind stitch the band on each side of the apron.

## **RUFFLING AND SEWING IN PIPING**

It is most convenient to do this work from the upper side, although it can be done from the lower also, by using the shirring plate. Place the goods for the ruffle in the ruffler the same as for plain ruffling, then insert the piping into the gauge nearest the ruffle gauge, drawing it through under the foot, insert the folded edge of the band into the gauge nearest the needle, drawing it also under the foot. You will notice that the band and piping gauge is made adjustable to the right or left, so you may stitch as close to the edge as desired.

## **REMARKS**

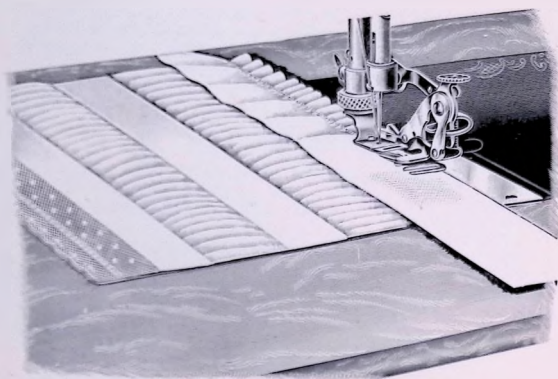
Should the crimping blade need to be sharpened, never file or grind it from the bottom side, but always from the top. It should be filed or stoned on angle, like the edge of a chisel.

The best work can be done when the crimping blade carries the cloth just beyond the needle as each crimp or pleat is formed.

## **HEMSTITCHING**

Fold a blotting paper (or other soft paper), which can be readily torn, until you get a thickness corresponding to the opening desired in the hemstitching; put one of the pieces of goods under the paper and the other above, then place all under the presser foot and sew through them. After being sewed, both pieces will be doubled back and forth to crease them well exactly on the line of stitches. Then fold all four edges in the same direction, and hold firmly while you tear out the paper. One edge of each or either piece may be cut and passed through the hemmer, or a row of stitching can be passed alongside the hemstitch and the double edge finished off as you choose.

## PUFFING

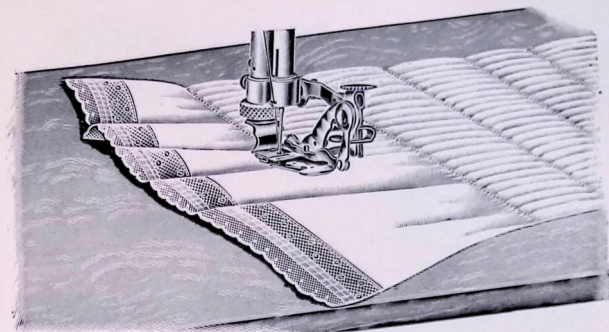


## PUFFING

All puffing is done with the ruffler, which attachment should be put in position on the machine as instructed under the head of ruffling. To make puffing, insert the band into the gauge or slot in the separator plate below the crumper plate, the same as for ruffling on a band, place the cloth to be puffed between the plates, the same as for a single ruffle, then proceed and gather one side, then reverse the goods, commencing at the opposite end and opposite edge, using a band for the new edge same as the first one. This stitches the band on both sides of the ruffle, and makes a handsome piece of puffing. The operation may be repeated as many times as required.

For scalloping, mullin cut lengthwise of the cloth and one inch wide is required; fold or double this strip thus producing a folded piece one-half inch in width, insert the cloth or band to which this scalloping is to be attached in the same manner as for puffing. Set the feed of the machine to produce a long stitch and adjust the ruffler very full so as to form pleats, then start sewing and swing the folded strip from side to side, keeping time with the machine; if the scalloping is made about 8 or 9 pleats to each scallop it is a nice size.

## SHIRRING



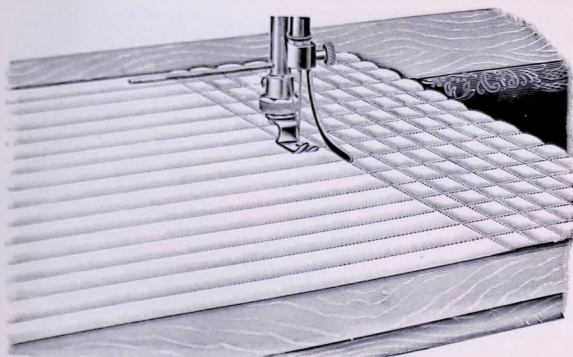
## SHIRRING

Shirring is done with the same attachment used for ruffling, and directions for placing the attachment in position will be found under that heading. Before placing the ruffler, the separator blade should be removed. To do this, loosen the little slotted set screw which is at the front end of the frame; drop the front end of the separator blade downward and draw it forward. Remove the front shuttle slide and insert in its place the shirring plate.

The object of using the shirring plate instead of the separator plate on the ruffler, is to permit the shirring of work of any width. To produce the work the goods should be inserted same as for plain ruffle, the presser bar lowered and the stitching commenced. It is always best, however, to run a small tape underneath the goods, this greatly strengthens the work. The tape should be run through the guides in the shirring plate.

The fullness of the shirring is controlled in the same manner as the fullness of the ruffle. The length of the stitch should be adjusted to correspond with the fullness of the gather being produced.

## QUILTING



## QUILTING

Quilter is attached by passing its rounded part through the hole in the presser bar, made for that purpose, in the manner shown in the cut.

Adjust it to the right or left according to the distance required between the lines of stitching, fasten it in place by the small screw in the back of the presser bar, having guide or flat part of the quilter raised just far enough from the bed of the machine to allow the free passage of the work under it.

Having made the first row of stitching the desired distance from the edge, place the work so that this first row of stitching will be under, and in line with the lower edge of the quilter guide, and sew the next seam, continuing the operation as desired. This will make the lines of stitching perfectly straight and parallel.

## BRAIDING



## BRAIDING

Attach the braider foot to the holder on the presser bar instead of the regular sewing foot.

Remove the front shuttle slide and insert in its place the under braider plate. Raise the presser bar lifter, pass the end of the braid through the slot, or groove, in the under braider plate, draw it through and pass it under the braider foot.

Then place the stamped pattern under the foot and lower the foot into position to sew, guiding the cloth with the right hand and holding the braid with the left hand to keep it from twisting.

## LIST OF ATTACHMENTS AND ACCESSORIES

	Shipping Weight
Ruffler .....	6 oz.
Tucker .....	6 oz.
Multiple Binder and Foot Hemmers .....	4 oz.
Braider Foot .....	2 oz.
Thread Cutter .....	2 oz.
Hemmer and Feller .....	2 oz.
Presser Foot .....	2 oz.
Shuttle .....	2 oz.
Needles, all sizes, per dozen .....	2 oz.
Cloth Guide .....	2 oz.
Guide Thumb Screw .....	2 oz.
Oil Can .....	2 oz.
Screw Driver .....	2 oz.
Shuttle Screw Driver .....	2 oz.
Quilter .....	2 oz.

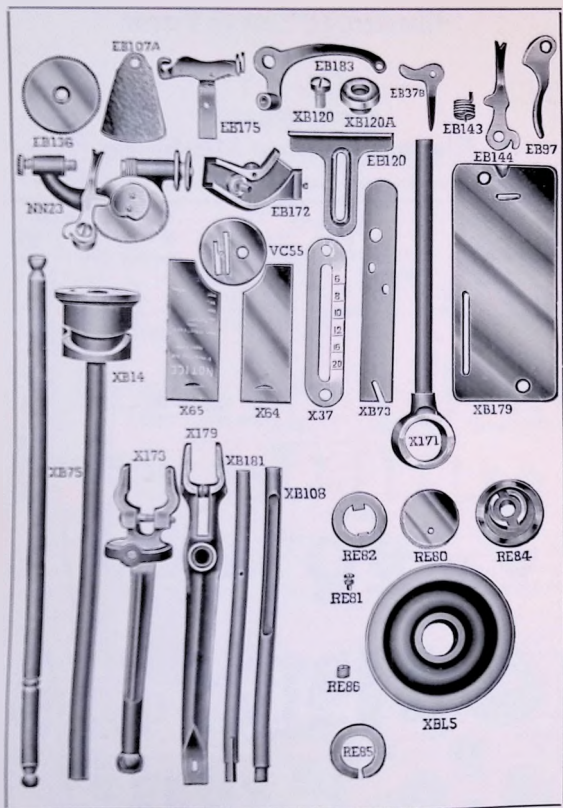
Remember that every machine before leaving the factory is thoroughly tested on all kinds of work and that it **must be right when received**. Should there be anything about the machine which you do not understand, correspond or communicate with the manufacturer or your dealer before condemning it.

Never under any circumstances use needles except those that are made expressly for this machine. We cannot guarantee a perfect working machine unless the proper needles are used. If the needle is a trifle too long or too short; has the eye a little further from or nearer to the point of the needle than it should be, or is not properly flattened on the shank, it will not allow the machine to do good work. So-called "cheap" needles are dear at any price.

Always speak a good word for your machine whenever and wherever you can.

When ordering new parts, specify the part number and part name





# LIST OF ILLUSTRATED PARTS (Continued)

No.	Name—	Shipping Weight
XB-3	Arm (not illustrated).....	11 lbs.
EB-2-S	Arm Screw .....	1 oz.
X-3	Eccentric .....	6 oz.
EB-20	Main Shaft Head Pin.....	1 oz.
V-5A	Medallion .....	2 oz.
EB-8	Medallion Screw .....	1 oz.
X-170	Feed Adjustment .....	2 oz.
EB-11-A	Feed Adjustment Screw.....	1 oz.
X-171	Feed Vertical Lever Complete.....	10 oz.
XB-14	Main Shaft Complete .....	10 oz.
NN-16	Brake Collar Pin .....	1 oz.
NN-23	Automatic Spooler, complete.....	12 oz.
XB-21	Automatic Spooler Friction Rubber.....	1 oz.
EB-135	Automatic Spooler Screw.....	1 oz.
EB-136	Spooler Worm Gear .....	1 oz.
EB-137	Spooler Worm Gear Stud.....	1 oz.
EB-138	Spooler Worm Gear Stud Nut.....	1 oz.
EB-139	Spooler Heart Cam .....	1 oz.
EB-140	Spooler Heart Cam Screw.....	1 oz.
EB-144	Automatic Spooler Distributor.....	1 oz.
EB-143	Spooler Distributor Spring .....	1 oz.
EB-145	Automatic Spooler Distributor Screw.....	1 oz.
EB-146	Automatic Spooler Spindle.....	1 oz.
EB-147	Automatic Spooler Spindle Pulley .....	1 oz.
EB-148	Automatic Spooler Step .....	1 oz.
EB-149	Automatic Spooler Step Spring .....	1 oz.
EB-150	Automatic Spooler Step Nut.....	1 oz.
X-173	Shuttle Vertical Lever, complete.....	14 oz.
X-25	Shuttle Vertical Lever Screw.....	2 oz.
B-72	Shuttle Vertical Lever Screw (long).....	1 oz.
EB-52	Fulcrum Screw Nut .....	1 oz.
EB-24	Shuttle Vertical Lever Adj. Screw.....	1 oz.
EB-28	Spool Pin .....	1 oz.
X-30	Stitch Regulator Slide Block .....	2 oz.
X-32	Stitch Regulator Slide Block Swivel.....	2 oz.
X-134	Stitch Regulator Slide Block Stud.....	2 oz.
EB-30	Stitch Reg. Slide Block Thumb Screw.....	2 oz.
B-85	Stitch Regulator Index Indicator.....	2 oz.
X-37	Stitch Regulator Index .....	1 oz.
EB-56	Stitch Regulator Index Screw .....	1 oz.
EB-190	Auxiliary Spring Case, complete.....	2 oz.
EB-38-B	Auxiliary Take-up Spring .....	1 oz.
EB-38-C	Tension Washer .....	1 oz.

Prices Quoted on Request

# LIST OF ILLUSTRATED PARTS (Continued)

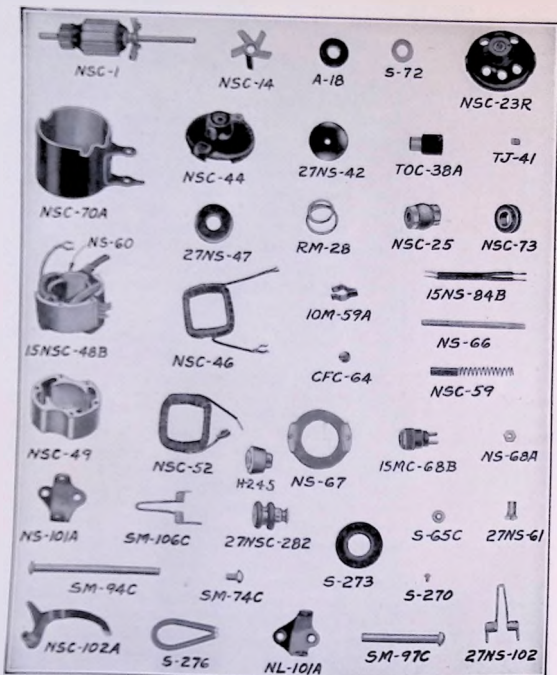
No.	Name—	Shipping Weight
ED-35-E	Tension Clip Washer.....	1 oz.
EB-38-D	Auxiliary Spring Washer.....	1 oz.
EB-39-A	Tension Spring.....	1 oz.
EB-39-B	Tension Nut.....	1 oz.
EB-37	Tension Release Pin.....	1 oz.
EB-37-A	Tension Stud.....	1 oz.
EB-37-B	Tension Release Lever.....	1 oz.
EB-37-C	Tension Release Lever Screw.....	1 oz.
EB-70	Friction Thread Guide Washer.....	1 oz.
EB-71	Friction Thread Guide Spring.....	1 oz.
EB-72	Friction Thread Guide Set Screw.....	1 oz.
EB-73	Friction Thread Guide.....	1 oz.
EB-74	Friction Thread Guide Stud Pin.....	1 oz.
XB-66	Bed (not illustrated).....	9 lbs.
S-151	Bed Hinge Complete.....	2 oz.
XB-73	Feed Bar.....	6 oz.
EB-49	Feed Bar Pin.....	1 oz.
XB-75	Feed Horizontal Lever.....	12 oz.
P-30	Feed Horizontal Lever Cup Screw.....	1 oz.
P-31	Feed Horizontal Lever Cup Screw Nut.....	1 oz.
VC-53	Feed Point.....	2 oz.
EB-54	Feed Point Screw.....	1 oz.
VC-55	Needle Plate.....	1 oz.
EB-56	Needle Plate Screw.....	1 oz.
X-44	Front Slide.....	2 oz.
X-65	Back Slide.....	2 oz.
EB-175	Shuttle Cradle, complete.....	2 oz.
EB-60	Shuttle Cradle Screw.....	1 oz.
X-179	Shuttle Horizontal Lever, complete.....	12 oz.
EB-64	Shuttle Horizontal Lever Adjusting Screw.....	1 oz.
EB-65	Shuttle Horizontal Lever Disc.....	1 oz.
EB-66	Shuttle Horizontal Lever Stud.....	1 oz.
EB-180	Shuttle Horizontal Lever Stud Cone.....	1 oz.
EB-68	Shuttle Horizontal Lever Stud Cone Set Screw.....	1 oz.
EB-69	Shuttle Horizontal Lever Stud Cone Adjusting Screw.....	1 oz.
XB-179	Face Plate Complete.....	8 oz.
EB-56	Face Plate Screw.....	1 oz.
EB-172	Cross Head Complete.....	2 oz.
EB-81	Cross Head Adjusting Screw.....	1 oz.
EB-11	Cross Head Needle Bar Screw.....	1 oz.
XB-181	Needle Bar, complete.....	7 oz.

Prices Quoted on Request

# LIST OF ILLUSTRATED PARTS (Continued)

No.	Name—	Shipping Weight
EB-182	Needle Clamp, complete.....	1 oz.
EB-83½	Needle Clamp Screw.....	1 oz.
EB-84	Needle Bar Cap.....	2 oz.
EB-40	Thread Guide.....	1 oz.
XB-108	Presser Bar.....	7 oz.
EB-187	Presser Bar Gib, complete.....	2 oz.
EB-11	Presser Bar Gib Adjusting Screw.....	1 oz.
EB-101	Presser Bar Spring.....	1 oz.
XB-112	Presser Bar Gib Stud.....	1 oz.
EB-68	Presser Bar Gib Stud Set Screw.....	1 oz.
EB-102	Presser Bar Thumb Screw.....	2 oz.
EB-97	Presser Bar Lifter.....	1 oz.
EB-98	Presser Bar Lifter Screw.....	1 oz.
EB-183	Take-up.....	3 oz.
XB-120	Take-up Screw.....	1 oz.
XB-120-A	Take-up Bushing.....	1 oz.
EB-107-A	Take-up Cover.....	2 oz.
EB-108	Take-up Cover Screw.....	1 oz.
XB-5	Fly Wheel.....	16 oz.
RE-80	Fly Wheel Brake Button.....	2 oz.
RE-81	Fly Wheel Brake Button Screw.....	2 oz.
RE-82	Fly Wheel Brake Collar Washer.....	1 oz.
RE-84	Fly Wheel Brake Collar.....	5 oz.
RE-85	Brake Collar Spring Washer.....	1 oz.
RE-86	Brake Collar Set Screw.....	1 oz.
X-103	Shuttle Complete.....	2 oz.
EB-117	Shuttle Spring.....	1 oz.
EB-118½	Shuttle Spring Screw.....	1 oz.
EB-119	Bobbin Complete.....	1 oz.
EB-120	Cloth Guide.....	2 oz.
EB-121	Cloth Guide Thumb Screw.....	2 oz.
EB-127	Quilter.....	2 oz.
EB-128	Quilter Screw.....	1 oz.
EB-131	Screw Driver.....	2 oz.
EB-132	Shuttle Screw Driver.....	2 oz.
EB-160	Attachment Holder Complete.....	2 oz.
EB-152	Attachment Holder Hub.....	2 oz.
EB-153	Attachment Holder Screw.....	1 oz.
EB-155	Attachment Holder Foot Screw.....	1 oz.
EB-156	Attachment Holder Nut.....	1 oz.
VC-157	Attachment Holder Presser Foot.....	2 oz.
EB-184	Attachment Holder Hemmer Foot.....	2 oz.

Prices Quoted on Request



**REPAIR PARTS LIST FOR No. 3115A ROUND TYPE SEWING MACHINE MOTOR WITH PULLEY LESS BRACKET. (Black motor with brown cord NO. 5001AX.)**

Part No.	Name	Shipping Weight
NSC-1	Armature Assembly	
	Armature, 115-volt	1 lb.
	Specify any other voltage	
A-18	Armature thrust washers—felt (4 used) each	2 oz.
S-72	Armature thrust washer—fibre (6 used) each	2 oz.
NSC-14	Armature Fan	4 oz.

## LIST OF ILLUSTRATED PARTS (Continued)

Part No.	Description	Shipping Weight
<b>Motor Cover and Motor Shell Assembly</b>		
NSC-23-R	Motor Cover (brush holder end) with NSC-25 bearing, RM-28 bearing spring, TOC-38 brush holders, TJ-41 screws, and CFC-64 carbon brush screws (order this motor cover if serial number is prior to 5B-41176)	8 oz.
NSC-23	Motor Cover (brush holder end) with NSC-25 bearing, and RM-28 bearing spring (order this motor cover if serial number is after 5B-41175)	8 oz.
NSC-25	Bearing with oil wick and rawhide washer. (Used in both motor covers)	2 oz.
RM-28	Bearing Spring (used in both motor covers)	2 oz.
TOC-38A	Brush Holder (2 used) each	2 oz.
TJ-41	Brush Holder Retaining Screw (2 used) each	2 oz.
27NS-42	Bearing Cap (fits brush holder end cover)	2 oz.
NSC-44	Motor Cover with NSC-25 Bearing and RM-28 bearing spring	8 oz.
27NS-47	Bearing Cap	2 oz.
NSC-70A	Motor Shell	1 lb.

### Field Assembly

15NSC-48B	Field Core with Coils, brown motor cord and core bushing, 115 volt. Specify any other voltage	1 lb.
NSC-46	Field Coil with 1¼" line lead extension, 115-V Specify any other voltage	4 oz.
NSC-52	Field Coil with 1¾" line lead extension, 115-V Specify any other voltage	4 oz.
NS-60	Fibre Retaining Strip for Motor Cord	2 oz.
10M-59A	Field Clip	2 oz.
NSC-49	Field Core, only	1 lb.
15NS-84-B	Brown Motor Cord	2 oz.
NSC-73	Cord Bushing	2 oz.

Prices Quoted on Request

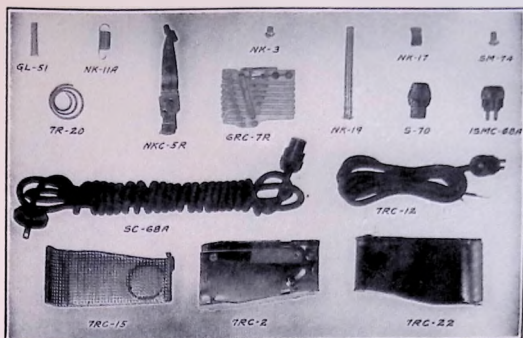
# LIST OF ILLUSTRATED PARTS (Continued)

No.	Name—	Shipping Weight
<b>Miscellaneous Motor Parts</b>		
NSC-59	Carbon Brush and Spring (2 used) each.....	2 oz.
CFC-64	Carbon Brush Screw (2 used) each.....	2 oz.
NS-66	Field Retaining Stud (2 used) each.....	2 oz.
NS-68A	Field Retaining Nut (2 used) each.....	2 oz.
27NS-61	Motor Cover Retaining Stud Nut (2 used) each.....	2 oz.
S-65C	Oil Cup (2 used) each.....	2 oz.
NS-67	Diaphragm .....	4 oz.
27NSC-282	Two Ring Pulley, complete.....	4 oz.
H245	Pulley .....	3 oz.
S-273	Pulley Rubber Ring (2 used) each.....	2 oz.
S-270	Pulley Set Screw.....	2 oz.
S-276	Bobbin Winder Spring.....	2 oz.
1SMC-68B	Male Half of Brown Connection Ring.....	2 oz.

No. 5 Head Bracket—Black enamel finish. Used on  
H. B. No. 3115A motor—National No. 5001AX.

NL-101A	No. 5 Head Bracket.....	4 oz.
NS-101A	No. 5 Head Bracket.....	4 oz.
NSC-102A	Release Lever.....	4 oz.
SM-94C	Bracket Rod, long.....	2 oz.
SM-97C	Bracket Rod, short.....	2 oz.
SM-74C	Bracket Rod Screw.....	2 oz.
SM-106C	Motor Support Spring.....	2 oz.
27NS-102	Motor Support Spring.....	2 oz.

PRICES QUOTED ON REQUEST



### LIST OF PARTS FOR N. S. FOOT CONTROL

Part No.	Part Name	Shipping Weight
GL-51	Cage Pivot Rivet.....	2 oz.
NK-11A	Contact Lever to Cage Spring.....	2 oz.
7R-20	Pedal Spring.....	2 oz.
NKC-5R	Contact Lever with GL-51 Cage Pivot Rivet.....	4 oz.
NK-3	Unit to Cage Retaining Screw (2 used).....	2 oz.
6RC-7R	Resistance Unit 115 Volt.....	10 oz.
	Specify any other Voltage.....	
NK-19	Pedal Pivot Pin.....	2 oz.
NK-17	Screen to Cage Clip (2 used).....	2 oz.
S-70	Female Half Connection Plug.....	4 oz.
SM-74	Pedal Pivot Pin Screw.....	2 oz.
ISMC-68A	Male Half Connection Plug.....	4 oz.
SC-68A	Lead-in Cord.....	8 oz.
7RC-12	Cord with Male Half Connection Plug.....	4 oz.
7RC-15	Screen with Cord Bushing.....	6 oz.
7RC-2	Cage with Rubber Bumpers and Insulation.....	10 oz.
7RC-22	Pedal with Roller.....	8 oz.

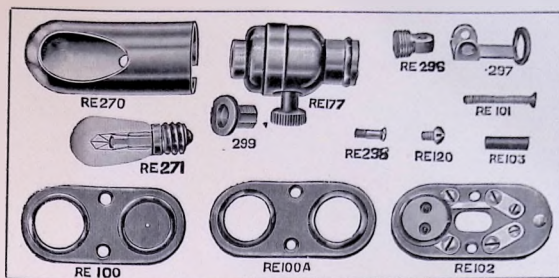
PRICES QUOTED ON REQUEST



### LIST OF PARTS FOR KNEE CONTROL

Part No.	Part Name	Shipping Weight
NKC-1A	Rheostat Complete with all parts listed below.....	3 lbs.
GRC-7-R	Resistance Unit Complete.....	10 oz.
NK-3	Unit to Cage Screw.....	2 oz.
NK-4-A	Unit to Cage Screw Insulation.....	2 oz.
NKC-5-R	Contact Lever Complete with Contact Clip.....	4 oz.
SR-24-A	Contact Clip only.....	2 oz.
GL-51	Contact Lever to Cage Pivot Pin.....	2 oz.
NK-11-A	Contact Lever to Cage Spring.....	2 oz.
NKC-12-A	Cord Complete with plug half (Chicago plug).....	4 oz.
NK-13	Cord only (not illustrated).....	4 oz.
NKC-15-A	Screen Complete.....	6 oz.
NK-17	Cage Clip for Screen.....	2 oz.
NK-15-A	Pedal.....	6 oz.
NK-19	Pedal Pivot Pin.....	2 oz.
SM-74	Pedal Pivot in Screw.....	2 oz.
NK-21-A	Moveable Extension.....	6 oz.
NK-22	Extension Screw for Pedal.....	2 oz.
R-13	Extension Screw Nut for Pedal.....	2 oz.
NK-24	Extension Screw Spring Washer for Pedal.....	2 oz.
NK-25	Extension Screw Bushing for Pedal.....	2 oz.
NKC-29-A	Cage and Attachment Brackets Complete.....	10 oz.
SM-69	Unit Cage Insulation Nut.....	2 oz.
NKC-30	Pedal and Moveable Extension Complete.....	10 oz.
ISMC-GBB	Male Half Connecting Plug.....	4 oz.

PRICES QUOTED ON REQUEST



### LIST OF PARTS FOR LIGHT CONNECTION BOX

		Shipping Weight
RE-100	Connection Block Cover for Knee Control	2 oz.
RE-100A	Connection Block Cover for Foot Control	2 oz.
RE-101	Connection Block Cover Screw	2 oz.
RE-102	Connection Insulator Complete with Contacts	2 oz.
RE-103	Connection Block Cover Screw Insulator	2 oz.
RE-120	Insulator Clip Screw	2 oz.
RE-177	Light Socket	4 oz.
RE-270	Lamp Reflector	4 oz.
RE-271	Lamp Bulb	2 oz.
RE-296	Lamp Hinge	2 oz.
RE-297	Lamp Frame	2 oz.
RE-298	Lamp Screw	2 oz.
RE-299	Fibre Bushings	2 oz.

Prices Quoted on Request

## HOW TO ORDER REPAIRS FOR THE EXPERT B. T. SEWING MACHINE

Repairs or needles may be obtained from the dealer who sold you the machine, or direct from the manufacturer. When ordering repair parts, always give the name and number of the parts wanted as well as the number of your machine which will be found on the bed plate under the front shuttle slide. When ordering needles, always specify that Eldredge F. S. or Class "C" needles are wanted and be sure to mention the thread size. A table of correct sizes will be found on page 10.

Prices Quoted on Request.



